

## **Application of Mixed-Stock Analysis for Yukon River Fall Chum Salmon, 2006**

This annual report documents the interim results of mixed-stock analysis (MSA) of Yukon River chum salmon harvested from the Pilot Station sonar test fishery in 2006 and represents a continuation of previous work by Flannery et al. (2007). Summer chum salmon continued to comprise >10% of the harvest through stratum 6, which ended on August 12. Fall chum salmon from the U.S. border region accounted for 43.8% of the total fall run, the largest contribution. The contributions of fall chum salmon from the other sampled regions were as follows: Tanana 20.6%, Canada mainstem 18.9%, Canada Porcupine 3.3%, White 12.7%, and Teslin 0.7%. The stock abundance estimates from the genetic and sonar data were concordant with those from the escapement and harvest data. The genetic and sonar stock abundance estimates continue to be less than the escapement and harvest estimates, though the disparity increased in 2006 when compared to 2004 and 2005. This discrepancy is not unexpected because, in addition to the effects of experimental error associated with the monitoring projects, it is estimated that a minimum of 5% of the run passes by Pilot Station after the sonar stops counting for the season at that location.

**Citation:** Flannery, B. F., R. R. Holder, G. F. Maschmann, E. J. Kretschmer, and J. K. Wenburg. 2008. Application of mixed-stock analysis for Yukon River fall chum salmon, 2006. U.S. Fish and Wildlife Service, Alaska Fisheries Data Series Number 2008-5, Anchorage.